

# LTE 700MHz Solution

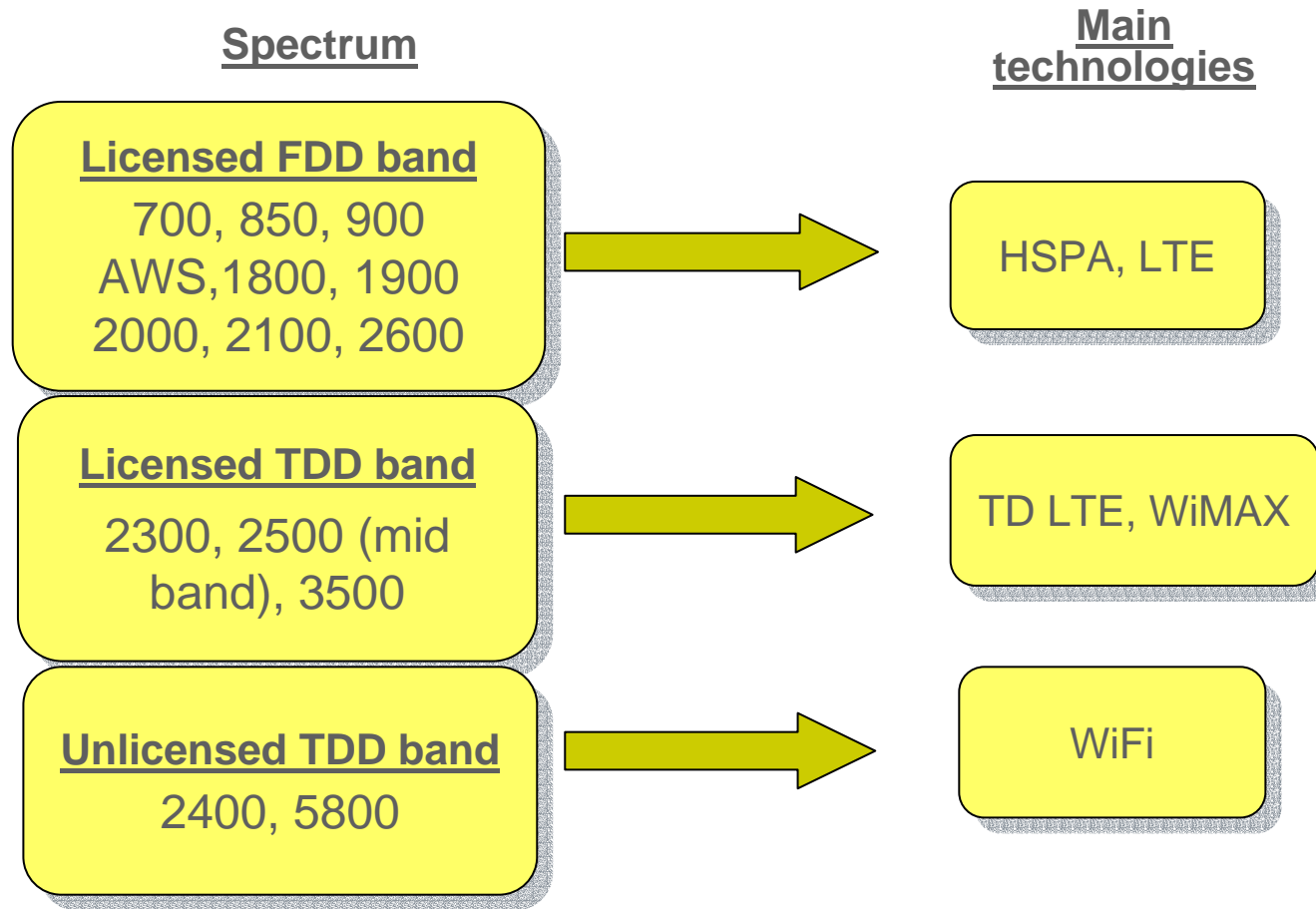
**Kamal Kanaujia, LTE Product Management – North America**  
**July 27, 2010**



**OPASTCO**

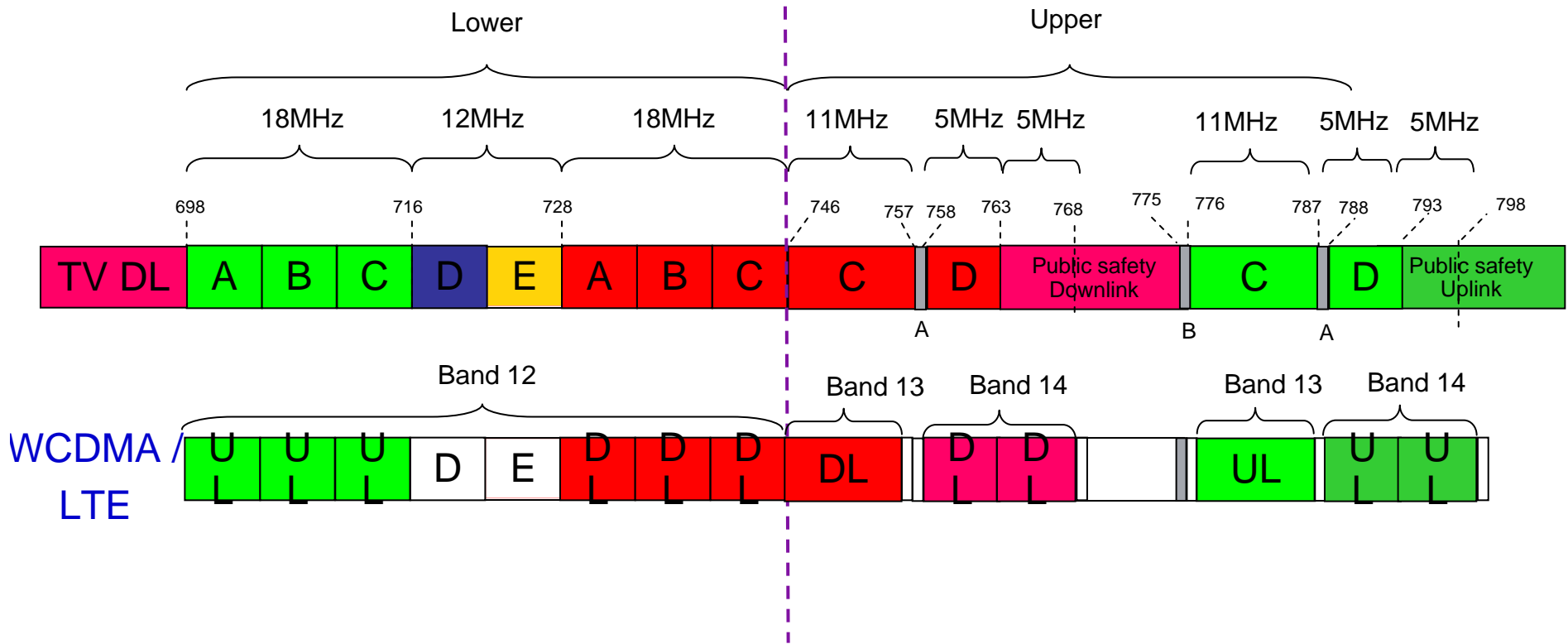
# Spectrum Defines Technology Choices

Current view...



**Ecosystem influenced by Spectrum choices on different Technologies**

# 700 MHz Band LTE Opportunities



RF Modules/RRH to support Band 12, 13 and Band 14

# LTE offers attractive option for 700MHz

- LTE offers scalable bandwidth option.
  - Addresses some of the key challenges in 700Mhz blocks in terms of uneven spectrum distribution and interference issues.
  - Easier to manage interference.
- Some of the key North American operators have committed to LTE with 700 MHz as a preferred option.
  - Ecosystem for LTE 700 MHz developing with commitments from Verizon and ATT for nationwide rollouts

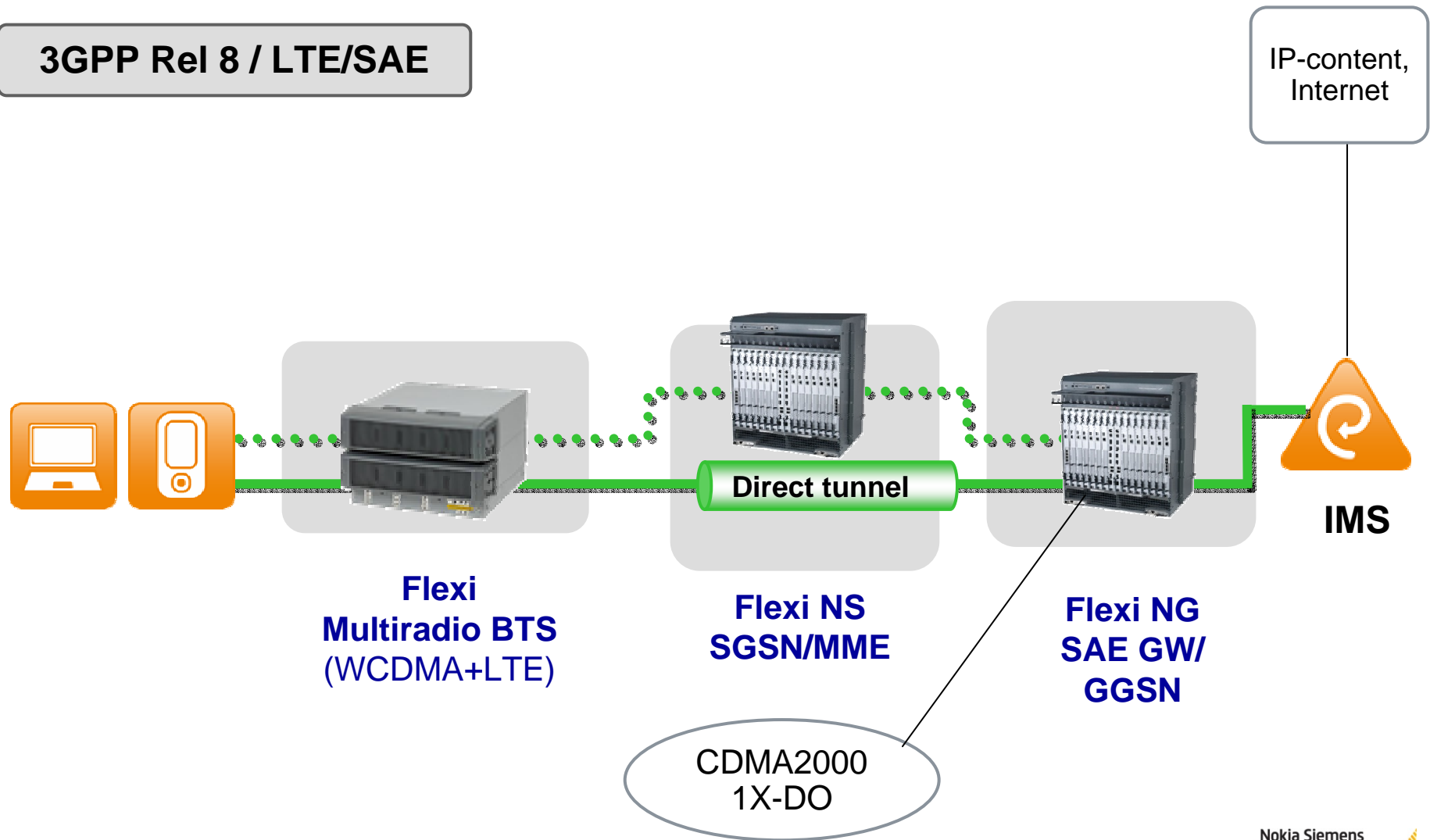


- LTE is the recommended technology for Public Safety

**Key players drive the LTE 700MHz ecosystem maturity**

# LTE 700MHz for existing GSM/WCDMA/CDMA & Greenfield operators

**3GPP Rel 8 / LTE/SAE**



# LTE 700MHz Live in US - Nov 2009

eNodeB Site for 3 sectors x 2 bands 700 & AWS with MIMO

Radio



Commercial HW  
Commercial SW  
March 09 BL

Core



Commercial HW  
Commercial SW  
March 09 BL

Device



(picture made public in mid-Dec 2009)

# Nokia Siemens Networks Solutions for LTE 700 MHz

Unique combination of HW and SW solutions to handle challenges of 700 MHz

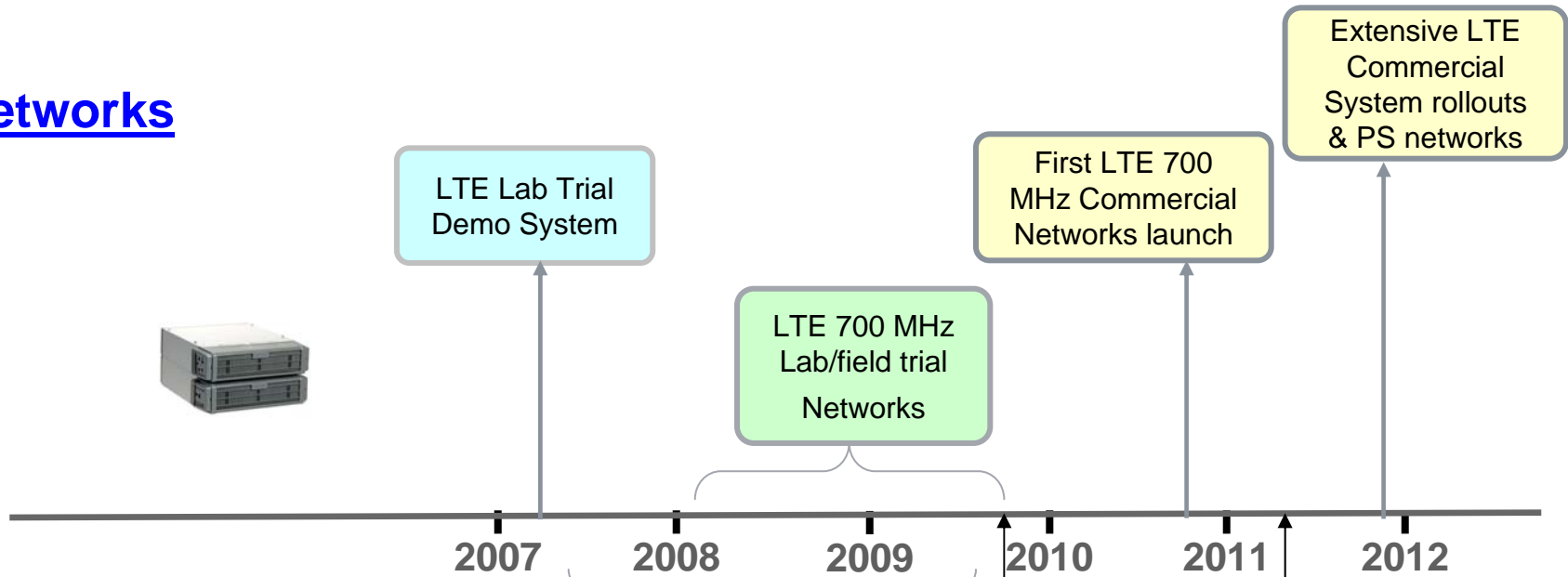
NSN invented PUCCH blanking that mitigates OOBE interference. Further pioneered it in 3GPP standardization

Unique SW tunable filter ensures no harm to LTE Uplink content

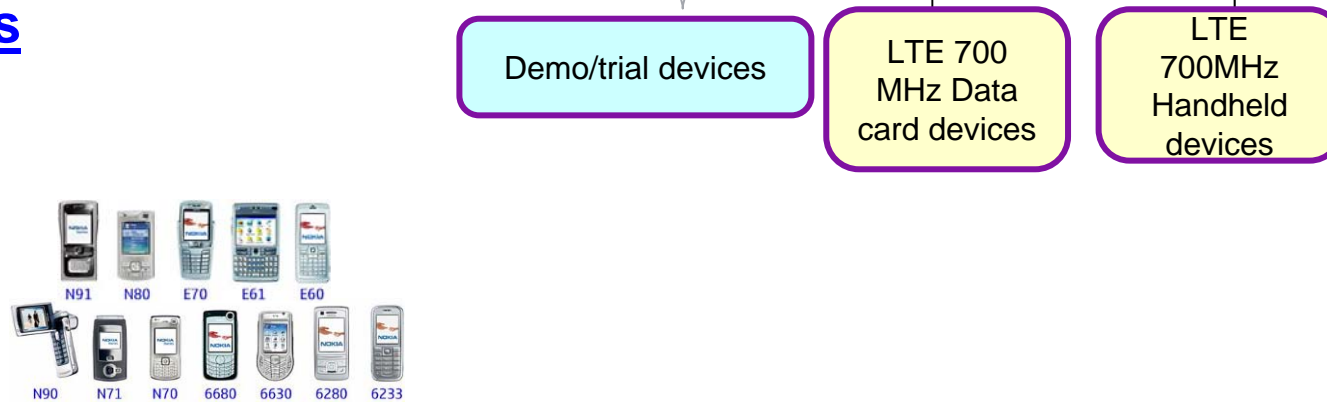
Distributed front-end filter overcomes eNodeB blocking

# Current Industry view on LTE 700MHz timeline

## Networks



## Devices



# Summary

## LTE 700MHz for Rural Operators

- Build on 700 MHz ecosystem enriched by tier 1 players
- Global economics of sale offered by LTE 700MHz ecosystem
  - Competitive devices and infrastructure offering
- Fully standardized solution with LTE 700MHz
  - Complexities minimized for inter-working due to standards approach
  - Forums (Ex: LSTI) to resolve IOT issues between handset & infrastructure vendors.
- 700 MHz provides increased coverage for rural players
  - Lower CAPEX due to smaller number of BTS sites.
  - LTE is a technology addressing both macro and micro environment.



**Thank you for your attention!**

**Any questions?**